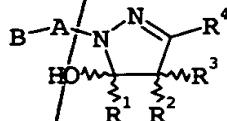


We claim;

1. The use of 5-hydroxypyrazolines of the formula I



I

10 where:

B is aryl with or without substitution or hetaryl with or without substitution;

A is C=O, C=S oder SO₂;

15

R¹ is C₂-C₁₀-alkyl, C₁-C₁₀-haloalkyl, C₃-C₁₀-alkenyl, C₃-C₁₀-haloalkenyl, C₃-C₁₀-alkynyl or C₃-C₁₀-haloalkynyl,

20

C₃-C₁₀-cycloalkyl with or without substitution, C₃-C₁₀-cycloalkenyl with or without substitution, C₃-C₁₀-cycloalkynyl with or without substitution or,

25

aryl with or without substitution, heterocyclyl with or without substitution or hetaryl with or without substitution;

R² is hydrogen;

30

R³ is hydrogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy, C₂-C₄-alkenyl, C₂-C₄-haloalkenyl, C₂-C₄-alkynyl or C₂-C₄-haloalkynyl, where

R' independently of one another are hydrogen or C₁-C₄-alkyl;

35

or R² and R³ together are a group

=O, =S or =N-O-R⁵, where

40

R⁵ is hydrogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl,

C₃-C₆-alkenyl, C₃-C₆-haloalkenyl, C₃-C₆-alkynyl or C₃-C₆-haloalkynyl;

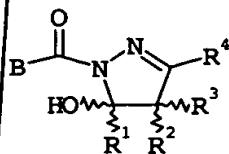
45

R⁴ is hydrogen, halogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl, COOR', hetaryl or heterocyclyl;

for controlling harmful fungi.

2. A 5-hydroxypyrazoline of the formula IA as set forth in claim 1,

5



IA

in which in case a:

10

R³ is nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy, C₂-C₄-alkenyl, C₂-C₄-haloalkenyl, C₂-C₄-alkynyl or C₂-C₄-haloalkynyl;

15

or R² and R³ together are a group

=O, =S or =N-O-R⁵,

20

R⁴ is hydrogen, halogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl or heterocyclyl;

and B, R¹ and R² are each as defined in claim 1, or

in case b:

25

B is naphthyl with or without substitution, heterocyclyl with or without substitution, hetaryl with or without substitution or substituted phenyl, and

30

R³ is hydrogen,

R⁴ is hydrogen, halogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl or heterocyclyl;

35

where R⁴ is not methyl if R¹ is methyl, tert-butyl or phenyl and the group B is phenyl which is substituted by 3-bromo, 4-halo, 4-methyl, 4-methoxy, 4-nitro, 4-dimethylamino or 4-fluoro-3-methyl, and

40

where R⁴ is not ethyl if both the group B and R¹ are 4-fluorophenyl, or

in case c:

45

B is unsubstituted phenyl,

R¹ is aryl with or without substitution, heterocyclyl with or without substitution or hetaryl with or without substitution,

5 C₃-C₁₀-cycloalkyl with or without substitution,
C₃-C₁₀-cycloalkenyl with or without substitution,
C₃-C₁₀-cycloalkynyl with or without substitution,

10 n-propyl with or without substitution, C₄-C₁₀-alkyl with or without substitution, CHCl₂, CH₂Cl, CCl₃, CHF₂, CF₂H, CF₂Cl, CFCl₂, C₂-C₁₀-haloalkyl, C₃-C₁₀-alkenyl with or without substitution, C₃-C₁₀-haloalkenyl, C₃-C₁₀-alkynyl with or without substitution or C₃-C₁₀-haloalkynyl;

15 R² is hydrogen;

R³ is hydrogen, nitro, cyano, amino, methylamino, dimethylamino, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy, C₂-C₄-alkenyl, C₂-C₄-haloalkenyl,
20 C₂-C₄-alkynyl or C₂-C₄-haloalkynyl,

or R² and R³ together are a group

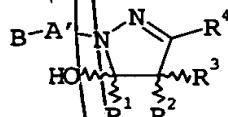
=O, =S or =N-O-R⁵, and

25 R⁴ is hydrogen, halogen, nitro, cyano, N(R')₂, C₁-C₄-alkyl, C₁-C₄-haloalkyl or heterocyclyl;

30 where R¹ is not tert-butyl if R⁴ is CF₂H and R⁴ is not methyl if R¹ is phenyl.

3. A 5-hydroxypyrazoline of the formula IB as set forth in claim 1,

35



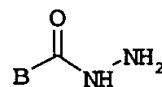
in which

40

A' is C=S or SO₂.

4. A process for preparing compounds of the formula IA as claimed in claim 2, which comprises reacting a hydrazine of the formula II,

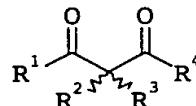
45



II

5 in which B is as defined in claim 2,

with a diketone of the formula III,



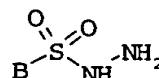
III

10

in which the substituents are each as defined in claim 2.

15 5. A process for preparing compounds of the formula IB as claimed in claim 3, in which A' is C=S, which comprises reacting compounds of the formula I as set forth in claim 1, in which A is C=O, with Lawesson's reagent.

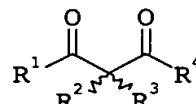
20 6. A process for preparing compounds of the formula IB as claimed in claim 3, in which A' is SO₂, which comprises reacting sulfohydrazines of the formula IV,



IV

25

in which B is as defined in claim 1 with diketones of the formula III,



III

30

in which the substituents are each as defined in claim 1.

35 7. The use of compounds of the formula I as set forth in claim 1, in which A is C=O, as intermediates for preparing compounds of the formula IB as claimed in claim 3 in which A' is C=S.

40 8. A composition which is suitable for controlling harmful fungi, comprising a solid or liquid carrier and a compound of the formula I as set forth in claim 1.

45 9. The use of the compounds I as set forth in claim 1 for preparing a composition which is suitable for controlling harmful fungi.

40

10. A method for controlling harmful fungi, which comprises
treating the fungi or the materials, plants, the soil or the
seeds to be protected against fungal attack with an effective
amount of a compound of the formula I as set forth in claim
5 1.

10

15

20

25

30

35

40

45